

PATENT SPECIFICATION

DRAWINGS ATTACHED

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COMPLETE SPECIFICATION

Improvements in and relating to Protective Sheets

5 We, CLARKE-POWER LIMITED, a British Company of 66, Hill Street, Richmond, Surrey, do hereby declare the invention, for which we pray that a Patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

10 This invention is concerned with the provision of strong, durable and inexpensive lengths and protective sheets of plastics material which may be transparent or opaque for use for example in protecting equipment, materials and machinery and buildings under construction so that workmen can continue their operations during cold and inclement weather.

15 Plastics material in the form of sheets and wide lengths has been available for many years but such plastics material by itself is not sufficiently durable since the sheets can be torn relatively easily. Fibre reinforced sheets of plastics material are also known and one useful product of this nature consists of two sheets of polythene superimposed one upon upon the other with rayon fabric mesh interposed between the polythene. This material is strong, durable and cheap and it is available in length 48" wide. The present invention may be used with advantage in connection with any suitable plastics material reinforced with fibres or by other means.

20 To give one example we have been experimenting with this material to see whether we can readily convert these lengths into sheets by joining lengths together side by side to make large sheets. To give an idea of what we have in mind it may here be mentioned that we may require sheets as large as 80' x 80' or even larger.

40 This problem has been solved by joining

the lengths together in side by side relation by a specially developed continuous weld sealing technique. In this way we can make our large sheets but experiments have shown that with lengths and sheets of reinforced plastics material and especially with large sheets some form of strengthening must be provided at the marginal edges of the sheets and lengths. 45

In order to provide strengthened edges of sheets or lengths we fold over about three or more inches of the material at each edge of the sheet or length and into the elongated pocket so formed we insert a continuous reinforcing strip for example of PVC or polythene or other suitable material about two inches wide. 50 55

It will be understood that the folded over part of the material extends as a flap beyond the marginal edge of the reinforcing strip. The folded over part of the material is then sealed or welded to the main part of the material along two weld lines the inner one of which is in that part of the flap beyond the strip and the outer one of which extends through the strip. In this manner a strong hem or edging is provided. Our experiments have shown that it is advantageous to provide a specially produced inserted strip in which the solid part or bead of the strip has a width of say $1/16"$, $1/8"$, or $1/4"$ while the whole strip has a width of say $1\frac{1}{2}"$. This solid bead which will extend along the marginal outer extremity of the finished sheet imparts considerable strength to the sheet. Naturally the inserted member or strip may be provided in long lengths which are then cut to the required lengths to sort the sheets being manufactured. 60 65 70 75

For single lengths metal eyelets are inserted 80

into the folded over part at the corners more or less on the outer weld line and for lengths that are to be joined together into sheets metal eyelets are let into the folded over part at intervals also more or less on the outer weld line.

For a sheet 80' x 80' four lengths 80' x 20' will be needed, with overlapping at each corner. In the manufacture of the sheet care should be taken to get an eyelet at each corner where the reinforcing strips are overlapped. The strip may be inserted into the pockets which are then sealed or the pockets may be sealed first leaving a hollow hem into which the strips may be threaded.

In this way we have provided a large sheet of durable and relatively cheap material, which may be transparent or opaque and which is fibre reinforced by mesh material, which is fabricated by joining together lengths of material and which is provided with a continuous reinforcement along each edge.

We have mentioned above that these sheets may be used to protect buildings during the building operation but naturally the sheets have many other uses. For example they may replace tarpaulins in transport or for the protection of haystacks. They may be used to cover swimming pools or greenhouses to help to conserve warmth. They may be used as car covers or temporary tents, or covers for stands or stalls.

In addition we have provided a durable and strengthened length of plastics material that may be used for many purposes.

In order that the invention may be clearly understood and readily carried into effect reference is now directed to the accompanying drawings given by way of example in which:—

Figure 1 is a part of a reinforced length of plastics material

Figure 2 is a reinforced length formed into a single sheet

Figure 3 is a reinforced sheet made from two lengths

Figure 4 is a section of the length illustrated in Figure 1.

In Figure 1 the length 1 is turned over at 2 and 3 along each edge to make pockets. Into each of the pockets is inserted a reinforcing strip 4 which is shorter than the turned over parts 2 and 3 of the length of plastics material. The turned over parts are welded to the main part of the sheet along two weld lines parallel to the outer edge of the sheet, an inner weld at 5 in that part of the pocket which extends beyond the reinforcing strip 4 and an outer weld at 6 through the reinforcing strip. At intervals along the length of the material metal eyelets 7 are extended through the material more or less on the outer weld line 6 in order to

strengthen the marginal edges and to provide connecting means if required.

Figure 2 shows a length of reinforced plastics material made into a single sheet reinforced along the side edges as described in connection with figure 1 and also reinforced at the ends in a similar manner. Instead of having eyelets 7 along the sides at intervals the sheet illustrated in Figure 2 has eyelets at the corners only.

Figure 3 illustrates two sheets each similar to that of Figure 2 but with eyelets along their length joined together in side by side relation simply by lacing. Other methods of joining are possible where a more weather proof join is needed for example two sheets may be overlapped and eyelets may be passed through both sheets at the marginal edges thereof.

WHAT WE CLAIM IS:—

1. A length of fabric or mesh reinforced plastics material characterised in this that the marginal edges of the material are strengthened by folding over the material along each marginal edge to form pockets, inserting a reinforcing strip into each pocket in such a manner that the folded over flap of the material at each edge extends inwardly beyond the inner marginal edge of the reinforcing strip, securing the folded over flaps in position by two weld lines along each edge comprising an inner weld line in that part of the flap beyond the reinforcing strip and an outer weld line through the strip and providing metal eyelets to secure the flaps in position.

2. A length of plastics material according to claim 1 having eyelets at intervals along the marginal edges to assist in securing the flaps.

3. A length of plastics material according to claim 2 wherein the eyelets coincide more or less with the outer weld line.

4. A length of plastics material according to any one of the preceding claims wherein the folded over flaps are about 3" long and wherein the inserted strips are about 2" wide.

5. A fabric or mesh reinforced sheet of plastics material comprising two or more lengths of material in accordance with claim 1 interconnected in side by side relation.

6. A fabric or mesh reinforced length of plastics material substantially as hereinbefore described in connection with Figures 1 and 4 of the accompanying drawings.

7. A fabric or mesh reinforced sheet of plastics material substantially as hereinbefore described in connection with either of Figures 2 and 3 of the accompanying drawings.

WITHERS & SPOONER,

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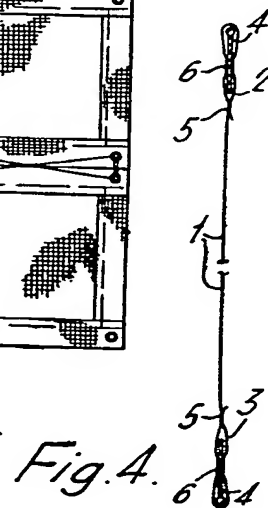
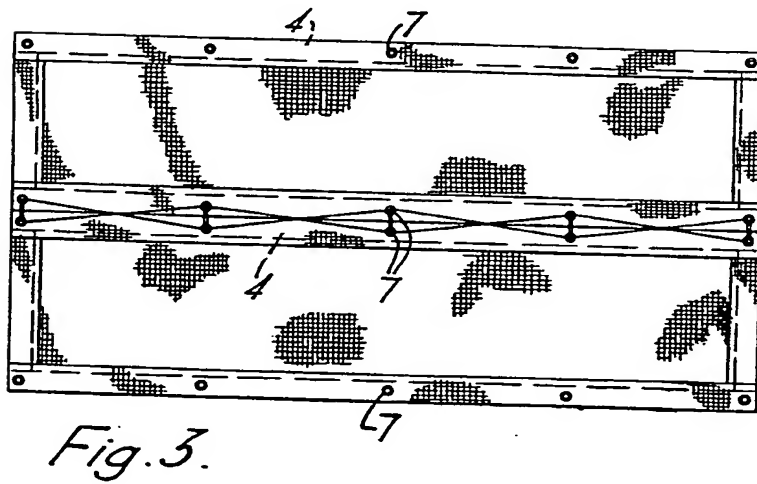
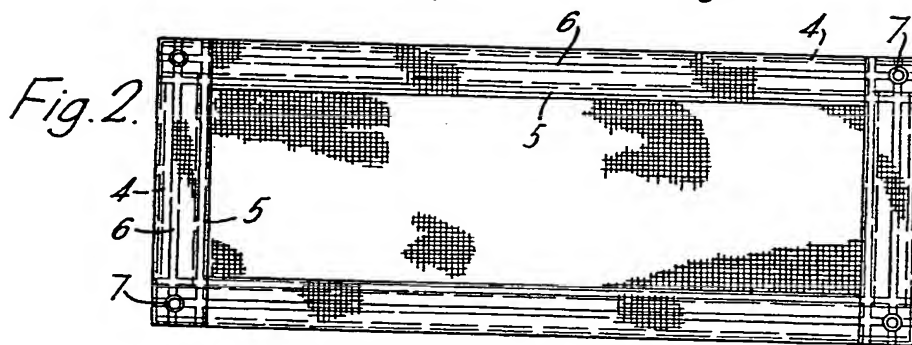
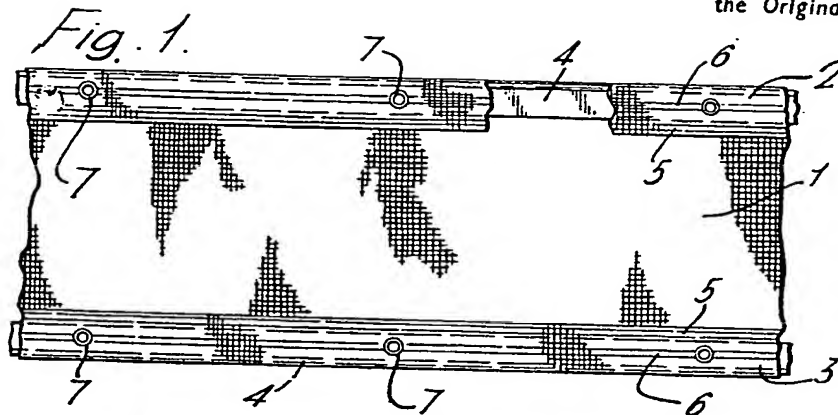
148—150, Holborn, London, E.C.1,
Agents for the Applicants.

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COMPLETE SPECIFICATION

1 SHEET

This drawing is a reproduction of the Original on a reduced scale



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